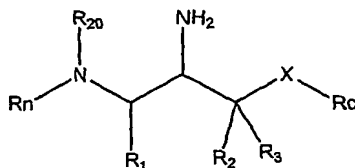


WHAT IS CLAIMED IS:

1. A compound of the formula:



5

or a pharmaceutically acceptable salt or ester thereof;

wherein X is O, S, NR<sub>20</sub>, or NR<sub>20</sub>NR<sub>20</sub>;

wherein each R<sub>20</sub> is H, C<sub>1-6</sub> alkyl or alkenyl, C<sub>1-6</sub> haloalkyl or C<sub>4-7</sub> cycloalkyl;

wherein R<sub>1</sub> is -(CH<sub>2</sub>)<sub>1-2</sub>-S(O)<sub>0-2</sub>-(C<sub>1-6</sub> alkyl), or

C<sub>1-10</sub> alkyl optionally substituted with 1, 2, or 3 groups independently selected from halogen, -OH, =O, -SH, -C≡N, -CF<sub>3</sub>, -C<sub>1-3</sub> alkoxy, amino, mono- or dialkylamino, -N(R)C(O)R', -OC(=O)-amino and -OC(=O)-mono- or dialkylamino, or

C<sub>2-6</sub> alkenyl or C<sub>2-6</sub> alkynyl, each of which is optionally substituted with 1, 2, or 3 groups independently selected from halogen, -OH, -SH, -C≡N, -CF<sub>3</sub>, C<sub>1-3</sub> alkoxy, amino, and mono- or dialkylamino, or

aryl, heteroaryl, heterocyclyl, -C<sub>1-6</sub> alkyl-aryl, -C<sub>1-6</sub> alkyl-heteroaryl, or -C<sub>1-6</sub> alkyl-heterocyclyl, where the ring portions of each are optionally substituted with 1, 2, 3, or 4 groups independently selected

from halogen, -OH, -SH, -C≡N, -NR<sub>105</sub>R'<sub>105</sub>, -CO<sub>2</sub>R, -N(R)COR', or -N(R)SO<sub>2</sub>R', -C(=O)-(C<sub>1-4</sub>) alkyl, -SO<sub>2</sub>-amino, -SO<sub>2</sub>-mono or dialkylamino, -C(=O)-amino, -C(=O)-mono or dialkylamino, -SO<sub>2</sub>-(C<sub>1-4</sub>) alkyl, or

C<sub>1-6</sub> alkoxy optionally substituted with 1, 2, or 3 groups which are independently selected from halogen, or

C<sub>3</sub>-C<sub>7</sub> cycloalkyl optionally substituted with 1, 2, or  
 3 groups independently selected from halogen,  
 -OH, -SH, -C≡N, -CF<sub>3</sub>, C<sub>1</sub>-C<sub>3</sub> alkoxy, amino, -C<sub>1</sub>-C<sub>6</sub>  
 alkyl and mono- or dialkylamino, or  
 5 C<sub>1</sub>-C<sub>10</sub> alkyl optionally substituted with 1, 2, or 3  
 groups independently selected from halogen, -  
 OH, -SH, -C≡N, -CF<sub>3</sub>, -C<sub>1</sub>-C<sub>3</sub> alkoxy, amino,  
 mono- or dialkylamino and -C<sub>1</sub>-C<sub>3</sub> alkyl, or  
 10 C<sub>2</sub>-C<sub>10</sub> alkenyl or C<sub>2</sub>-C<sub>10</sub> alkynyl each of which is  
 optionally substituted with 1, 2, or 3 groups  
 independently selected from halogen, -OH, -SH,  
 -C≡N, -CF<sub>3</sub>, C<sub>1</sub>-C<sub>3</sub> alkoxy, amino, C<sub>1</sub>-C<sub>6</sub> alkyl and  
 mono- or dialkylamino; and the heterocyclyl  
 group is optionally further substituted with  
 15 oxo;  
 R and R' independently are hydrogen, C<sub>1</sub>-C<sub>10</sub> alkyl, C<sub>1</sub>-C<sub>10</sub>  
 alkylaryl or C<sub>1</sub>-C<sub>10</sub> alkylheteroaryl;  
 wherein R<sub>c</sub> is hydrogen, -(CR<sub>245</sub>R<sub>250</sub>)<sub>0-4</sub>-aryl, -(CR<sub>245</sub>R<sub>250</sub>)<sub>0-4</sub>-  
 heteroaryl, -(CR<sub>245</sub>R<sub>250</sub>)<sub>0-4</sub>-heterocyclyl, -(CR<sub>245</sub>R<sub>250</sub>)<sub>0-4</sub>-aryl-  
 20 heteroaryl, -(CR<sub>245</sub>R<sub>250</sub>)<sub>0-4</sub>-aryl-heterocyclyl, -(CR<sub>245</sub>R<sub>250</sub>)<sub>0-4</sub>-  
 aryl-aryl, -(CR<sub>245</sub>R<sub>250</sub>)<sub>0-4</sub>-heteroaryl-aryl, -(CR<sub>245</sub>R<sub>250</sub>)<sub>0-4</sub>-  
 heteroaryl-heterocyclyl, -(CR<sub>245</sub>R<sub>250</sub>)<sub>0-4</sub>-heteroaryl-  
 heteroaryl, -(CR<sub>245</sub>R<sub>250</sub>)<sub>0-4</sub>-heterocyclyl-heteroaryl,  
 -(CR<sub>245</sub>R<sub>250</sub>)<sub>0-4</sub>-heterocyclyl-heterocyclyl, -(CR<sub>245</sub>R<sub>250</sub>)<sub>0-4</sub>-  
 25 heterocyclyl-aryl, -[C(R<sub>255</sub>)(R<sub>260</sub>)]<sub>1-3</sub>-CO-N-(R<sub>255</sub>)<sub>2</sub>, -  
 CH(aryl)<sub>2</sub>, -CH(heteroaryl)<sub>2</sub>, -CH(heterocyclyl)<sub>2</sub>,  
 -CH(aryl)(heteroaryl), -(CH<sub>2</sub>)<sub>0-1</sub>-CH((CH<sub>2</sub>)<sub>0-6</sub>-OH)-(CH<sub>2</sub>)<sub>0-1</sub>-  
 aryl, -(CH<sub>2</sub>)<sub>0-1</sub>-CH((CH<sub>2</sub>)<sub>0-6</sub>-OH)-(CH<sub>2</sub>)<sub>0-1</sub>-heteroaryl, -CH(-aryl  
 or -heteroaryl)-CO-O(C<sub>1</sub>-C<sub>4</sub> alkyl), -CH(-CH<sub>2</sub>-OH)-CH(OH)-  
 30 phenyl-NO<sub>2</sub>, (C<sub>1</sub>-C<sub>6</sub> alkyl)-O-(C<sub>1</sub>-C<sub>6</sub> alkyl)-OH; -CH<sub>2</sub>-NH-CH<sub>2</sub>-  
 CH(-O-CH<sub>2</sub>-CH<sub>3</sub>)<sub>2</sub>, -(CH<sub>2</sub>)<sub>0-6</sub>-C(=NR<sub>235</sub>)(NR<sub>235</sub>R<sub>240</sub>), or  
 C<sub>1</sub>-C<sub>10</sub> alkyl optionally substituted with 1, 2, or 3 groups  
 independently selected from the group consisting of

$R_{205}$ ,  $-OC=ONR_{235}R_{240}$ ,  $-S(=O)_{0-2}(C_1-C_6 \text{ alkyl})$ ,  $-SH$ ,  
 $-NR_{235}C=ONR_{235}R_{240}$ ,  $-C=ONR_{235}R_{240}$ , and  $-S(=O)_2NR_{235}R_{240}$ , or  
 $-(CH_2)_{0-3}-(C_3-C_8) \text{ cycloalkyl}$  wherein the cycloalkyl is  
optionally substituted with 1, 2, or 3 groups  
independently selected from the group consisting of  
 $R_{205}$ ,  $-CO_2H$ , and  $-CO_2-(C_1-C_4 \text{ alkyl})$ , or  
cyclopentyl, cyclohexyl, or cycloheptyl ring fused to  
aryl, heteroaryl, or heterocyclyl wherein one, two  
or three carbons of the cyclopentyl, cyclohexyl, or  
cycloheptyl is optionally replaced with a heteroatom  
independently selected from NH,  $NR_{215}$ , O, or  $S(=O)_{0-2}$ ,  
and wherein the cyclopentyl, cyclohexyl, or  
cycloheptyl group can be optionally substituted with  
one or two groups that are independently  $R_{205}$ ,  $=O$ ,  
 $-CO-NR_{235}R_{240}$ , or  $-SO_2-(C_1-C_4 \text{ alkyl})$ , or  
 $C_2-C_{10} \text{ alkenyl}$  or  $C_2-C_{10} \text{ alkynyl}$ , each of which is  
optionally substituted with 1, 2, or 3  $R_{205}$  groups,  
wherein  
each aryl and heteroaryl is optionally substituted with  
1, 2, or 3  $R_{200}$ , and wherein each heterocyclyl is  
optionally substituted with 1, 2, 3, or 4  $R_{210}$ ;  
 $R_{200}$  at each occurrence is independently selected from  $-OH$ ,  
 $-NO_2$ , halogen,  $-CO_2H$ ,  $C\equiv N$ ,  $-(CH_2)_{0-4}-CO-NR_{220}R_{225}$ ,  $-(CH_2)_{0-4}-$   
 $CO-(C_1-C_{12} \text{ alkyl})$ ,  $-(CH_2)_{0-4}-CO-(C_2-C_{12} \text{ alkenyl})$ ,  $-(CH_2)_{0-4}-$   
 $CO-(C_2-C_{12} \text{ alkynyl})$ ,  $-(CH_2)_{0-4}-CO-(C_3-C_7 \text{ cycloalkyl})$ ,  $-$   
 $(CH_2)_{0-4}-CO-aryl$ ,  $-(CH_2)_{0-4}-CO-heteroaryl$ ,  $-(CH_2)_{0-4}-CO-$   
 $heterocyclyl$ ,  $-(CH_2)_{0-4}-CO-O-R_{215}$ ,  $-(CH_2)_{0-4}-SO_2-NR_{220}R_{225}$ ,  $-$   
 $(CH_2)_{0-4}-SO-(C_1-C_8 \text{ alkyl})$ ,  $-(CH_2)_{0-4}-SO_2-(C_1-C_{12} \text{ alkyl})$ ,  $-$   
 $(CH_2)_{0-4}-SO_2-(C_3-C_7 \text{ cycloalkyl})$ ,  $-(CH_2)_{0-4}-N(H \text{ or } R_{215})-CO-O-$   
 $R_{215}$ ,  $-(CH_2)_{0-4}-N(H \text{ or } R_{215})-CO-N(R_{215})_2$ ,  $-(CH_2)_{0-4}-N-CS-$   
 $N(R_{215})_2$ ,  $-(CH_2)_{0-4}-N(-H \text{ or } R_{215})-CO-R_{220}$ ,  $-(CH_2)_{0-4}-NR_{220}R_{225}$ ,  
 $-(CH_2)_{0-4}-O-CO-(C_1-C_6 \text{ alkyl})$ ,  $-(CH_2)_{0-4}-O-P(O)-(OR_{240})_2$ ,  
 $-(CH_2)_{0-4}-O-CO-N(R_{215})_2$ ,  $-(CH_2)_{0-4}-O-CS-N(R_{215})_2$ ,  $-(CH_2)_{0-4}-O-$   
 $(R_{215})$ ,  $-(CH_2)_{0-4}-O-(R_{215})-COOH$ ,  $-(CH_2)_{0-4}-S-(R_{215})$ ,  $-(CH_2)_{0-4}-$

O-(C<sub>1</sub>-C<sub>6</sub> alkyl optionally substituted with 1, 2, 3, or 5 - F), C<sub>3</sub>-C<sub>7</sub> cycloalkyl, -(CH<sub>2</sub>)<sub>0-4</sub>-N(H or R<sub>215</sub>)-SO<sub>2</sub>-R<sub>220</sub>, -(CH<sub>2</sub>)<sub>0-4</sub>-C<sub>3</sub>-C<sub>7</sub> cycloalkyl, or C<sub>1</sub>-C<sub>10</sub> alkyl optionally substituted with 1, 2, or 3 R<sub>205</sub> groups, or

C<sub>2</sub>-C<sub>10</sub> alkenyl or C<sub>2</sub>-C<sub>10</sub> alkynyl, each of which is optionally substituted with 1 or 2 R<sub>205</sub> groups, wherein

the aryl and heteroaryl groups at each occurrence are optionally substituted with 1, 2, or 3 groups that are independently R<sub>205</sub>, R<sub>210</sub>, or C<sub>1</sub>-C<sub>6</sub> alkyl substituted with 1, 2, or 3 groups that are independently R<sub>205</sub> or R<sub>210</sub>, and wherein

the heterocyclyl group at each occurrence is optionally substituted with 1, 2, or 3 groups that are independently R<sub>210</sub>;

R<sub>205</sub> at each occurrence is independently selected from C<sub>1</sub>-C<sub>6</sub> alkyl, halogen, -OH, -O-phenyl, -SH, -C≡N, -CF<sub>3</sub>, C<sub>1</sub>-C<sub>6</sub> alkoxy, NH<sub>2</sub>, NH(C<sub>1</sub>-C<sub>6</sub> alkyl) or N-(C<sub>1</sub>-C<sub>6</sub> alkyl)(C<sub>1</sub>-C<sub>6</sub> alkyl);

R<sub>210</sub> at each occurrence is independently selected from halogen, C<sub>1</sub>-C<sub>6</sub> alkoxy, C<sub>1</sub>-C<sub>6</sub> haloalkoxy, -NR<sub>220</sub>R<sub>225</sub>, OH, C≡N, -CO-(C<sub>1</sub>-C<sub>4</sub> alkyl), -SO<sub>2</sub>-NR<sub>235</sub>R<sub>240</sub>, -CO-NR<sub>235</sub>R<sub>240</sub>, -SO<sub>2</sub>-(C<sub>1</sub>-C<sub>4</sub> alkyl), =O, or

C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl or C<sub>3</sub>-C<sub>7</sub> cycloalkyl, each of which is optionally substituted with 1, 2, or 3 R<sub>205</sub> groups;

R<sub>215</sub> at each occurrence is independently selected from C<sub>1</sub>-C<sub>6</sub> alkyl, -(CH<sub>2</sub>)<sub>0-2</sub>-(aryl), C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, C<sub>3</sub>-C<sub>7</sub> cycloalkyl, and -(CH<sub>2</sub>)<sub>0-2</sub>-(heteroaryl), -(CH<sub>2</sub>)<sub>0-2</sub>-(heterocyclyl), wherein

the aryl group at each occurrence is optionally substituted with 1, 2, or 3 groups that are independently R<sub>205</sub> or R<sub>210</sub>, and wherein

- the heterocyclyl and heteroaryl groups at each occurrence are optionally substituted with 1, 2, or 3  $R_{210}$ ;
- $R_{220}$  and  $R_{225}$  at each occurrence are independently selected from -H, -C<sub>3</sub>-C<sub>7</sub> cycloalkyl, -(C<sub>1</sub>-C<sub>2</sub> alkyl)-(C<sub>3</sub>-C<sub>7</sub> cycloalkyl), -
- 5 (C<sub>1</sub>-C<sub>6</sub> alkyl)-O-(C<sub>1</sub>-C<sub>3</sub> alkyl), -C<sub>2</sub>-C<sub>6</sub> alkenyl, -C<sub>2</sub>-C<sub>6</sub> alkynyl, -C<sub>1</sub>-C<sub>6</sub> alkyl chain with one double bond and one triple bond, -aryl, -heteroaryl, and -heterocyclyl, or -C<sub>1</sub>-C<sub>10</sub> alkyl optionally substituted with -OH, -NH<sub>2</sub> or halogen, wherein
- 10 the aryl, heterocyclyl and heteroaryl groups at each occurrence are optionally substituted with 1, 2, or 3  $R_{270}$  groups
- $R_{235}$  and  $R_{240}$  at each occurrence are independently H, or C<sub>1</sub>-C<sub>6</sub> alkyl;
- 15  $R_{245}$  and  $R_{250}$  at each occurrence are independently selected from -H, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkylaryl, C<sub>1</sub>-C<sub>4</sub> alkylheteroaryl, C<sub>1</sub>-C<sub>4</sub> hydroxyalkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, -(CH<sub>2</sub>)<sub>0-4</sub>-C<sub>3</sub>-C<sub>7</sub> cycloalkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, and phenyl; or
- 20  $R_{245}$  and  $R_{250}$  are taken together with the carbon to which they are attached to form a carbocycle of 3, 4, 5, 6, or 7 carbon atoms, where one carbon atom is optionally replaced by a heteroatom selected from -O-, -S-, -SO<sub>2</sub>-, and -NR<sub>220</sub>-;
- 25  $R_{255}$  and  $R_{260}$  at each occurrence are independently selected from -H, -(CH<sub>2</sub>)<sub>1-2</sub>-S(O)<sub>0-2</sub>-(C<sub>1</sub>-C<sub>6</sub> alkyl), -(C<sub>1</sub>-C<sub>4</sub> alkyl)-aryl, -(C<sub>1</sub>-C<sub>4</sub> alkyl)-heteroaryl, -(C<sub>1</sub>-C<sub>4</sub> alkyl)-heterocyclyl, -aryl, -heteroaryl, -heterocyclyl, -(CH<sub>2</sub>)<sub>1-4</sub>-R<sub>265</sub>-(CH<sub>2</sub>)<sub>0-4</sub>-aryl, -(CH<sub>2</sub>)<sub>1-4</sub>-R<sub>265</sub>-(CH<sub>2</sub>)<sub>0-4</sub>-heteroaryl, -(CH<sub>2</sub>)<sub>1-4</sub>-R<sub>265</sub>-(CH<sub>2</sub>)<sub>0-4</sub>-heterocyclyl, or
- 30 C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl or -(CH<sub>2</sub>)<sub>0-4</sub>-C<sub>3</sub>-C<sub>7</sub> cycloalkyl, each of which is optionally substituted with 1, 2, or 3  $R_{205}$  groups, wherein

each aryl or phenyl is optionally substituted with 1, 2, or 3 groups that are independently  $R_{205}$ ,  $R_{210}$ , or  $C_1$ - $C_6$  alkyl substituted with 1, 2, or 3 groups that are independently  $R_{205}$  or  $R_{210}$ , and wherein  
 5 each heterocyclyl is optionally substituted with 1, 2, 3, or 4  $R_{210}$ ;

$R_{265}$  at each occurrence is independently -O-, -S- or -N( $C_1$ - $C_6$  alkyl)-;

$R_{270}$  at each occurrence is independently  $R_{205}$ , halogen  $C_1$ - $C_6$  alkoxy,  $C_1$ - $C_6$  haloalkoxy,  $NR_{235}R_{240}$ , -OH, -C $\equiv$ N, -CO-( $C_1$ - $C_4$  alkyl), -SO<sub>2</sub>- $NR_{235}R_{240}$ , -CO- $NR_{235}R_{240}$ , -SO<sub>2</sub>-( $C_1$ - $C_4$  alkyl), =O,  
 10 or

$C_1$ - $C_6$  alkyl,  $C_2$ - $C_6$  alkenyl,  $C_2$ - $C_6$  alkynyl or -(CH<sub>2</sub>)<sub>0-4</sub>- $C_3$ - $C_7$  cycloalkyl, each of which is optionally substituted  
 15 with 1, 2, or 3  $R_{205}$  groups;

wherein  $R_n$  is  $R'_{100}$ , -SO<sub>2</sub> $R'_{100}$ , -(CRR')<sub>1-6</sub> $R'_{100}$ , -C(=O)-(CRR')<sub>0-6</sub> $R_{100}$ , -C(=O)-(CRR')<sub>1-6</sub>-O- $R'_{100}$ , -C(=O)-(CRR')<sub>1-6</sub>-S- $R'_{100}$ , -C(=O)-(CRR')<sub>1-6</sub>-C(=O)- $R_{100}$ , -C(=O)-(CRR')<sub>1-6</sub>-SO<sub>2</sub>- $R_{100}$ ;  
 -C(=O)-(CRR')<sub>1-6</sub>-NR<sub>100</sub>- $R'_{100}$ ; or  $\begin{matrix} Y-Z-X \\ | \\ R_4 \end{matrix}$ -(CH<sub>2</sub>)<sub>n7</sub>-CHC(O)- $R_4$ ;

$R_4$  is selected from the group consisting of H; NH<sub>2</sub>; -NH-(CH<sub>2</sub>)<sub>n6</sub>- $R_{4-1}$ ; -NHR<sub>8</sub>; -NR<sub>50</sub>C(O) $R_5$ ;  $C_1$ - $C_4$  alkyl-NHC(O) $R_5$ ; -(CH<sub>2</sub>)<sub>0-4</sub> $R_8$ ; -O- $C_1$ - $C_4$  alkanoyl; OH;  $C_6$ - $C_{10}$  aryloxy optionally substituted with 1, 2, or 3 groups that are independently halogen,  $C_1$ - $C_4$  alkyl, -CO<sub>2</sub>H, -C(O)- $C_1$ - $C_4$  alkoxy, or  $C_1$ - $C_4$  alkoxy;  $C_1$ - $C_6$  alkoxy; aryl  $C_1$ - $C_4$  alkoxy; -NR<sub>50</sub>CO<sub>2</sub> $R_{51}$ ; - $C_1$ - $C_4$  alkyl-  
 20 NR<sub>50</sub>CO<sub>2</sub> $R_{51}$ ; -C $\equiv$ N; -CF<sub>3</sub>; -CF<sub>2</sub>-CF<sub>3</sub>; -C $\equiv$ CH; -CH<sub>2</sub>-CH=CH<sub>2</sub>; -(CH<sub>2</sub>)<sub>1-4</sub>- $R_{4-1}$ ; -(CH<sub>2</sub>)<sub>1-4</sub>-NH- $R_{4-1}$ ; -O-(CH<sub>2</sub>)<sub>n6</sub>- $R_{4-1}$ ; -S-(CH<sub>2</sub>)<sub>n6</sub>- $R_{4-1}$ ; -(CH<sub>2</sub>)<sub>0-4</sub>-NHC(O)-(CH<sub>2</sub>)<sub>0-6</sub>- $R_{52}$ ; -(CH<sub>2</sub>)<sub>0-4</sub>- $R_{53}$ -(CH<sub>2</sub>)<sub>0-4</sub>- $R_{54}$ ;

wherein

$n_6$  is 0, 1, 2, or 3;

30  $n_7$  is 0, 1, 2, or 3;

$R_{4-1}$  is selected from the group consisting of -SO<sub>2</sub>-( $C_1$ - $C_8$  alkyl), -SO-( $C_1$ - $C_8$  alkyl), -S-( $C_1$ - $C_8$  alkyl), -S-CO-

(C<sub>1</sub>-C<sub>6</sub> alkyl), -SO<sub>2</sub>-NR<sub>4-2</sub>R<sub>4-3</sub>; -CO-C<sub>1</sub>-C<sub>2</sub> alkyl; -CO-NR<sub>4-3</sub>R<sub>4-4</sub>;

R<sub>4-2</sub> and R<sub>4-3</sub> are independently H, C<sub>1</sub>-C<sub>3</sub> alkyl, or C<sub>3</sub>-C<sub>6</sub> cycloalkyl;

5 R<sub>4-4</sub> is alkyl, arylalkyl, alkanoyl, or arylalkanoyl;

R<sub>4-6</sub> is-H or C<sub>1</sub>-C<sub>6</sub> alkyl;

R<sub>5</sub> is selected from the group consisting of C<sub>3</sub>-C<sub>7</sub> cycloalkyl; C<sub>1</sub>-C<sub>6</sub> alkyl optionally substituted with 1, 2, or 3 groups that are independently halogen, 10 -NR<sub>6</sub>R<sub>7</sub>, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>5</sub>-C<sub>6</sub> heterocycloalkyl, C<sub>5</sub>-C<sub>6</sub> heteroaryl, C<sub>6</sub>-C<sub>10</sub> aryl, C<sub>3</sub>-C<sub>7</sub> cycloalkyl C<sub>1</sub>-C<sub>4</sub> alkyl, -S-C<sub>1</sub>-C<sub>4</sub> alkyl, -SO<sub>2</sub>-C<sub>1</sub>-C<sub>4</sub> alkyl, -CO<sub>2</sub>H, -CONR<sub>6</sub>R<sub>7</sub>, -CO<sub>2</sub>-C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>6</sub>-C<sub>10</sub> aryloxy; heteroaryl optionally substituted with 1, 2, or 3 groups that are 15 independently C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, halogen, C<sub>1</sub>-C<sub>4</sub> haloalkyl, or OH; heterocycloalkyl optionally substituted with 1, 2, or 3 groups that are independently C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, halogen, or C<sub>2</sub>-C<sub>4</sub> alkanoyl; aryl optionally substituted with 1, 20 2, 3, or 4 groups that are independently halogen, OH, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, or C<sub>1</sub>-C<sub>4</sub> haloalkyl; and -NR<sub>6</sub>R<sub>7</sub>; wherein

R<sub>6</sub> and R<sub>7</sub> are independently selected from the group consisting of H, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkanoyl, 25 phenyl, -SO<sub>2</sub>-C<sub>1</sub>-C<sub>4</sub> alkyl, phenyl C<sub>1</sub>-C<sub>4</sub> alkyl;

R<sub>8</sub> is selected from the group consisting of -SO<sub>2</sub>-heteroaryl, -SO<sub>2</sub>-aryl, -SO<sub>2</sub>-heterocycloalkyl, -SO<sub>2</sub>-C<sub>1</sub>-C<sub>10</sub> alkyl, -C(O)NHR<sub>9</sub>, heterocycloalkyl, -S-C<sub>1</sub>-C<sub>6</sub> alkyl, -S-C<sub>2</sub>-C<sub>4</sub> alkanoyl, wherein

30 R<sub>9</sub> is aryl C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> alkyl, or H;

R<sub>50</sub> is H or C<sub>1</sub>-C<sub>6</sub> alkyl;

R<sub>51</sub> is selected from the group consisting of aryl C<sub>1</sub>-C<sub>4</sub> alkyl; C<sub>1</sub>-C<sub>6</sub> alkyl optionally substituted with 1, 2, or 3 groups that are independently halogen, cyano,

heteroaryl,  $-NR_6R_7$ ,  $-C(O)NR_6R_7$ ,  $C_3-C_7$  cycloalkyl, or  $-C_1-C_4$  alkoxy; heterocycloalkyl optionally substituted with 1 or 2 groups that are independently  $C_1-C_4$  alkyl,  $C_1-C_4$  alkoxy, halogen,  $C_2-C_4$  alkanoyl, aryl  $C_1-C_4$  alkyl, and  $-SO_2$   $C_1-C_4$  alkyl; alkenyl; alkynyl; heteroaryl optionally substituted with 1, 2, or 3 groups that are independently OH,  $C_1-C_4$  alkyl,  $C_1-C_4$  alkoxy, halogen,  $NH_2$ ,  $NH(C_1-C_6$  alkyl) or  $N(C_1-C_6$  alkyl)( $C_1-C_6$  alkyl); heteroarylalkyl optionally substituted with 1, 2, or 3 groups that are independently  $C_1-C_4$  alkyl,  $C_1-C_4$  alkoxy, halogen,  $NH_2$ ,  $NH(C_1-C_6$  alkyl) or  $N(C_1-C_6$  alkyl)( $C_1-C_6$  alkyl); aryl; heterocycloalkyl;  $C_3-C_8$  cycloalkyl; and cycloalkylalkyl; wherein the aryl; heterocycloalkyl,  $C_3-C_8$  cycloalkyl, and cycloalkylalkyl groups are optionally substituted with 1, 2, 3, 4 or 5 groups that are independently halogen, CN,  $NO_2$ ,  $C_1-C_6$  alkyl,  $C_1-C_6$  alkoxy,  $C_2-C_6$  alkanoyl,  $C_1-C_6$  haloalkyl,  $C_1-C_6$  haloalkoxy, hydroxy,  $C_1-C_6$  hydroxyalkyl,  $C_1-C_6$  alkoxy  $C_1-C_6$  alkyl,  $C_1-C_6$  thioalkoxy,  $C_1-C_6$  thioalkoxy  $C_1-C_6$  alkyl, or  $C_1-C_6$  alkoxy  $C_1-C_6$  alkoxy;

$R_{52}$  is heterocycloalkyl, heteroaryl, aryl, cycloalkyl,  $-S(O)_{0-2}-C_1-C_6$  alkyl,  $CO_2H$ ,  $-C(O)NH_2$ ,  $-C(O)NH(alkyl)$ ,  $-C(O)N(alkyl)(alkyl)$ ,  $-CO_2-alkyl$ ,  $-NHS(O)_{0-2}-C_1-C_6$  alkyl,  $-N(alkyl)S(O)_{0-2}-C_1-C_6$  alkyl,  $-S(O)_{0-2}$  heteroaryl,  $-S(O)_{0-2}$  aryl,  $-NH(arylalkyl)$ ,  $-N(alkyl)(arylalkyl)$ , thioalkoxy, or alkoxy, each of which is optionally substituted with 1, 2, 3, 4, or 5 groups that are independently alkyl, alkoxy, thioalkoxy, halogen, haloalkyl, haloalkoxy, alkanoyl,  $NO_2$ , CN, alkoxycarbonyl, or aminocarbonyl;

$R_{53}$  is absent,  $-O-$ ,  $-C(O)-$ ,  $-NH-$ ,  $-N(alkyl)-$ ,  $-NH-S(O)_{0-2}-$ ,  $-N(alkyl)-S(O)_{0-2}-$ ,  $-S(O)_{0-2}-NH-$ ,  $-S(O)_{0-2}-N(alkyl)-$ ,  $-NH-C(S)-$ , or  $-N(alkyl)-C(S)-$ ;



- $R_{54}$  is heteroaryl, aryl, arylalkyl, heterocycloalkyl,  $CO_2H$ ,  $-CO_2$ -alkyl,  $-C(O)NH(alkyl)$ ,  $-C(O)N(alkyl)(alkyl)$ ,  $-C(O)NH_2$ ,  $C_1-C_8$  alkyl, OH, aryloxy, alkoxy, arylalkoxy,  $NH_2$ ,  $NH(alkyl)$ ,  $N(alkyl)(alkyl)$ , or  $-C_1-C_6$  alkyl- $CO_2-C_1-C_6$  alkyl, each of which is optionally substituted with 1, 2, 3, 4, or 5 groups that are independently alkyl, alkoxy,  $CO_2H$ ,  $-CO_2$ -alkyl, thioalkoxy, halogen, haloalkyl, haloalkoxy, hydroxyalkyl, alkanoyl,  $NO_2$ , CN, alkoxycarbonyl, or aminocarbonyl;
- $X'$  is selected from the group consisting of  $-C_1-C_6$  alkylidenyl optionally optionally substituted with 1, 2, or 3 methyl groups; and  $-NR_{4-6}-$ ; or
- $R_4$  and  $R_{4-6}$  combine to form  $-(CH_2)_{n_{10}}-$ , wherein  $n_{10}$  is 1, 2, 3, or 4;
- $Z$  is selected from the group consisting of a bond;  $SO_2$ ;  $SO$ ;  $S$ ; and  $C(O)$ ;
- $Y$  is selected from the group consisting of  $H$ ;  $C_1-C_4$  haloalkyl;  $C_5-C_6$  heterocycloalkyl;  $C_6-C_{10}$  aryl;  $OH$ ;  $-N(Y_1)(Y_2)$ ;  $C_1-C_{10}$  alkyl optionally substituted with 1 thru 3 substituents which can be the same or different and are selected from the group consisting of halogen, hydroxy, alkoxy, thioalkoxy, and haloalkoxy;  $C_3-C_8$  cycloalkyl optionally substituted with 1, 2, or 3 groups independently selected from  $C_1-C_3$  alkyl, and halogen; alkoxy; aryl optionally substituted with halogen, alkyl, alkoxy, CN or  $NO_2$ ; arylalkyl optionally substituted with halogen, alkyl, alkoxy, CN or  $NO_2$ ; wherein
- $Y_1$  and  $Y_2$  are the same or different and are  $H$ ;  $C_1-C_{10}$  alkyl optionally substituted with 1, 2, or 3 substituents selected from the group consisting of halogen,  $C_1-C_4$  alkoxy,  $C_3-C_8$  cycloalkyl, and  $OH$ ;  $C_2-C_6$  alkenyl;  $C_2-C_6$  alkanoyl; phenyl;  $-SO_2-C_1-C_4$  alkyl; phenyl  $C_1-C_4$  alkyl; or  $C_3-C_8$  cycloalkyl  $C_1-C_4$  alkyl; or

Y<sub>1</sub>, Y<sub>2</sub> and the nitrogen to which they are attached form a ring selected from the group consisting of piperazinyl, piperidinyl, morpholinyl, and pyrrolidinyl, wherein each ring is optionally substituted with 1, 2, 3, or 4 groups that are independently C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, C<sub>1</sub>-C<sub>6</sub> alkoxy C<sub>1</sub>-C<sub>6</sub> alkyl, or halogen;

R<sub>100</sub> and R'<sub>100</sub> independently represent aryl, heteroaryl, -aryl-W-aryl, -aryl-W-heteroaryl, -aryl-W-heterocyclyl, -heteroaryl-W-aryl, -heteroaryl-W-heteroaryl, -heteroaryl-W-heterocyclyl, -heterocyclyl-W-aryl, -heterocyclyl-W-heteroaryl, -heterocyclyl-W-heterocyclyl, -CH[(CH<sub>2</sub>)<sub>0-2</sub>-O-R<sub>150</sub>]- (CH<sub>2</sub>)<sub>0-2</sub>-aryl, -CH[(CH<sub>2</sub>)<sub>0-2</sub>-O-R<sub>150</sub>]- (CH<sub>2</sub>)<sub>0-2</sub>-heterocyclyl or -CH[(CH<sub>2</sub>)<sub>0-2</sub>-O-R<sub>150</sub>]- (CH<sub>2</sub>)<sub>0-2</sub>-heteroaryl, where the ring portions of each are optionally substituted with 1, 2, or 3 groups independently selected from

-OR, -NO<sub>2</sub>, halogen, -C≡N, -OCF<sub>3</sub>, -CF<sub>3</sub>, -(CH<sub>2</sub>)<sub>0-4</sub>-O-P(=O)(OR)(OR'), -(CH<sub>2</sub>)<sub>0-4</sub>-CO-NR<sub>105</sub>R'<sub>105</sub>, -(CH<sub>2</sub>)<sub>0-4</sub>-O-(CH<sub>2</sub>)<sub>0-4</sub>-CONR<sub>102</sub>R<sub>102</sub>', -(CH<sub>2</sub>)<sub>0-4</sub>-CO-(C<sub>1</sub>-C<sub>12</sub> alkyl), -(CH<sub>2</sub>)<sub>0-4</sub>-CO-(C<sub>2</sub>-C<sub>12</sub> alkenyl), -(CH<sub>2</sub>)<sub>0-4</sub>-CO-(C<sub>2</sub>-C<sub>12</sub> alkynyl), -(CH<sub>2</sub>)<sub>0-4</sub>-CO-(CH<sub>2</sub>)<sub>0-4</sub>-(C<sub>3</sub>-C<sub>7</sub> cycloalkyl), -(CH<sub>2</sub>)<sub>0-4</sub>-R<sub>110</sub>, -(CH<sub>2</sub>)<sub>0-4</sub>-R<sub>120</sub>, -(CH<sub>2</sub>)<sub>0-4</sub>-R<sub>130</sub>, -(CH<sub>2</sub>)<sub>0-4</sub>-CO-R<sub>110</sub>, -(CH<sub>2</sub>)<sub>0-4</sub>-CO-R<sub>120</sub>, -(CH<sub>2</sub>)<sub>0-4</sub>-CO-R<sub>130</sub>, -(CH<sub>2</sub>)<sub>0-4</sub>-CO-R<sub>140</sub>, -(CH<sub>2</sub>)<sub>0-4</sub>-CO-O-R<sub>150</sub>, -(CH<sub>2</sub>)<sub>0-4</sub>-SO<sub>2</sub>-NR<sub>105</sub>R'<sub>105</sub>, -(CH<sub>2</sub>)<sub>0-4</sub>-SO<sub>2</sub>-(C<sub>1</sub>-C<sub>8</sub> alkyl), -(CH<sub>2</sub>)<sub>0-4</sub>-SO<sub>2</sub>-(C<sub>1</sub>-C<sub>12</sub> alkyl), -(CH<sub>2</sub>)<sub>0-4</sub>-SO<sub>2</sub>-(CH<sub>2</sub>)<sub>0-4</sub>-(C<sub>3</sub>-C<sub>7</sub> cycloalkyl), -(CH<sub>2</sub>)<sub>0-4</sub>-N(R<sub>150</sub>)-CO-O-R<sub>150</sub>, -(CH<sub>2</sub>)<sub>0-4</sub>-N(R<sub>150</sub>)-CO-N(R<sub>150</sub>)<sub>2</sub>, -(CH<sub>2</sub>)<sub>0-4</sub>-N(R<sub>150</sub>)-CS-N(R<sub>150</sub>)<sub>2</sub>, -(CH<sub>2</sub>)<sub>0-4</sub>-N(R<sub>150</sub>)-CO-R<sub>105</sub>, -(CH<sub>2</sub>)<sub>0-4</sub>-NR<sub>105</sub>R'<sub>105</sub>, -(CH<sub>2</sub>)<sub>0-4</sub>-R<sub>140</sub>, -(CH<sub>2</sub>)<sub>0-4</sub>-O-CO-(C<sub>1</sub>-C<sub>6</sub> alkyl), -(CH<sub>2</sub>)<sub>0-4</sub>-O-P(O)-(O-R<sub>110</sub>)<sub>2</sub>, -(CH<sub>2</sub>)<sub>0-4</sub>-O-CO-N(R<sub>150</sub>)<sub>2</sub>, -(CH<sub>2</sub>)<sub>0-4</sub>-O-CS-N(R<sub>150</sub>)<sub>2</sub>, -(CH<sub>2</sub>)<sub>0-4</sub>-O-(R<sub>150</sub>), -(CH<sub>2</sub>)<sub>0-4</sub>-O-R<sub>150</sub>'-COOH, -(CH<sub>2</sub>)<sub>0-4</sub>-S-(R<sub>150</sub>), -(CH<sub>2</sub>)<sub>0-4</sub>-N(R<sub>150</sub>)-SO<sub>2</sub>-R<sub>105</sub>, -(CH<sub>2</sub>)<sub>0-4</sub>-C<sub>3</sub>-C<sub>7</sub> cycloalkyl, (C<sub>2</sub>-C<sub>10</sub>)alkenyl, or (C<sub>2</sub>-C<sub>10</sub>)alkynyl, or

- R<sub>100</sub> is C<sub>1</sub>-C<sub>10</sub> alkyl optionally substituted with 1, 2, or 3 R<sub>115</sub> groups, or
- R<sub>100</sub> is -(C<sub>1</sub>-C<sub>6</sub> alkyl)-O-C<sub>1</sub>-C<sub>6</sub> alkyl) or -(C<sub>1</sub>-C<sub>6</sub> alkyl)-S-(C<sub>1</sub>-C<sub>6</sub> alkyl), each of which is optionally substituted with 1, 2, or 3 R<sub>115</sub> groups, or
- R<sub>100</sub> is C<sub>3</sub>-C<sub>8</sub> cycloalkyl optionally substituted with 1, 2, or 3 R<sub>115</sub> groups;
- W is -(CH<sub>2</sub>)<sub>0-4</sub>-, -O-, -S(O)<sub>0-2</sub>-, -N(R<sub>135</sub>)-, -CR(OH)- or -C(O)-;
- R<sub>102</sub> and R<sub>102'</sub> independently are hydrogen, or
- C<sub>1</sub>-C<sub>10</sub> alkyl optionally substituted with 1, 2, or 3 groups that are independently halogen, aryl or -R<sub>110</sub>;
- R<sub>105</sub> and R'<sub>105</sub> independently represent -H, -R<sub>110</sub>, -R<sub>120</sub>, C<sub>3</sub>-C<sub>7</sub> cycloalkyl, -(C<sub>1</sub>-C<sub>2</sub> alkyl)-(C<sub>3</sub>-C<sub>7</sub> cycloalkyl), -(C<sub>1</sub>-C<sub>6</sub> alkyl)-O-(C<sub>1</sub>-C<sub>3</sub> alkyl), C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, or C<sub>1</sub>-C<sub>6</sub> alkyl chain with one double bond and one triple bond, or
- C<sub>1</sub>-C<sub>6</sub> alkyl optionally substituted with -OH or -NH<sub>2</sub>; or,
- C<sub>1</sub>-C<sub>6</sub> alkyl optionally substituted with 1, 2, or 3 groups independently selected from halogen, or
- R<sub>105</sub> and R'<sub>105</sub> together with the atom to which they are attached form a 3 to 7 membered carbocyclic ring, where one member is optionally a heteroatom selected from -O-, -S(O)<sub>0-2</sub>-, -N(R<sub>135</sub>)-, the ring being optionally substituted with 1, 2 or three R<sub>140</sub> groups;
- R<sub>115</sub> at each occurrence is independently halogen, -OH, -CO<sub>2</sub>R<sub>102</sub>, -C<sub>1</sub>-C<sub>6</sub> thioalkoxy, -CO<sub>2</sub>-phenyl, -NR<sub>105</sub>R'<sub>135</sub>, -SO<sub>2</sub>-(C<sub>1</sub>-C<sub>8</sub> alkyl), -C(=O)R<sub>180</sub>, R<sub>180</sub>, -CONR<sub>105</sub>R'<sub>105</sub>, -SO<sub>2</sub>NR<sub>105</sub>R'<sub>105</sub>, -NH-CO-(C<sub>1</sub>-C<sub>6</sub> alkyl), -NH-C(=O)-OH, -NH-C(=O)-OR, -NH-C(=O)-O-phenyl, -O-C(=O)-(C<sub>1</sub>-C<sub>6</sub> alkyl), -O-C(=O)-amino, -O-C(=O)-mono- or dialkylamino, -O-C(=O)-phenyl, -O-(C<sub>1</sub>-C<sub>6</sub> alkyl)-CO<sub>2</sub>H, -NH-SO<sub>2</sub>-(C<sub>1</sub>-C<sub>6</sub> alkyl), C<sub>1</sub>-C<sub>6</sub> alkoxy or C<sub>1</sub>-C<sub>6</sub> haloalkoxy;

R<sub>135</sub> is C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, C<sub>3</sub>-C<sub>7</sub> cycloalkyl, -(CH<sub>2</sub>)<sub>0-2</sub>-(aryl), -(CH<sub>2</sub>)<sub>0-2</sub>-(heteroaryl), or -(CH<sub>2</sub>)<sub>0-2</sub>-(heterocyclyl);

5 R<sub>140</sub> is heterocyclyl optionally substituted with 1, 2, 3, or 4 groups independently selected from C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, halogen, hydroxy, cyano, nitro, amino, mono(C<sub>1</sub>-C<sub>6</sub>)alkylamino, di(C<sub>1</sub>-C<sub>6</sub>)alkylamino, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, C<sub>1</sub>-C<sub>6</sub> haloalkyl, C<sub>1</sub>-C<sub>6</sub> haloalkoxy, amino(C<sub>1</sub>-C<sub>6</sub>)alkyl, mono(C<sub>1</sub>-C<sub>6</sub>)alkylamino(C<sub>1</sub>-C<sub>6</sub>)alkyl, di(C<sub>1</sub>-C<sub>6</sub>)alkylamino(C<sub>1</sub>-C<sub>6</sub>)alkyl, and =O;

10 R<sub>150</sub> is hydrogen, C<sub>3</sub>-C<sub>7</sub> cycloalkyl, -(C<sub>1</sub>-C<sub>2</sub> alkyl)-(C<sub>3</sub>-C<sub>7</sub> cycloalkyl), C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, C<sub>1</sub>-C<sub>6</sub> alkyl with one double bond and one triple bond, -R<sub>110</sub>, -R<sub>120</sub>, or C<sub>1</sub>-C<sub>6</sub> alkyl optionally substituted with 1, 2, 3, or 4 groups independently selected from -OH, -NH<sub>2</sub>, C<sub>1</sub>-C<sub>3</sub> alkoxy, R<sub>110</sub>, and halogen;

15 R<sub>150'</sub> is C<sub>3</sub>-C<sub>7</sub> cycloalkyl, -(C<sub>1</sub>-C<sub>3</sub> alkyl)-(C<sub>3</sub>-C<sub>7</sub> cycloalkyl), C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, C<sub>1</sub>-C<sub>6</sub> alkyl with one double bond and one triple bond, -R<sub>110</sub>, -R<sub>120</sub>, or C<sub>1</sub>-C<sub>6</sub> alkyl optionally substituted with 1, 2, 3, or 4 groups independently selected from -OH, -NH<sub>2</sub>, C<sub>1</sub>-C<sub>3</sub> alkoxy, R<sub>110</sub>, and halogen;

20 R<sub>180</sub> is selected from morpholinyl, thiomorpholinyl, piperazinyl, piperidinyl, homomorpholinyl, homothiomorpholinyl, homothiomorpholinyl S-oxide, homothiomorpholinyl S,S-dioxide, pyrrolinyl and pyrrolidinyl, each of which is optionally substituted with 1, 2, 3, or 4 groups independently selected from C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, halogen, hydroxy, cyano, nitro, amino, mono(C<sub>1</sub>-C<sub>6</sub>)alkylamino, di(C<sub>1</sub>-C<sub>6</sub>)alkylamino, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, C<sub>1</sub>-C<sub>6</sub> haloalkyl, C<sub>1</sub>-C<sub>6</sub> haloalkoxy, amino(C<sub>1</sub>-C<sub>6</sub>)alkyl, mono(C<sub>1</sub>-C<sub>6</sub>)alkylamino(C<sub>1</sub>-C<sub>6</sub>)alkyl, di(C<sub>1</sub>-C<sub>6</sub>)alkylamino(C<sub>1</sub>-C<sub>6</sub>)alkyl, and =O;

30 R<sub>110</sub> is aryl optionally substituted with 1 or 2 R<sub>125</sub> groups;

- $R_{125}$  at each occurrence is independently halogen, amino, mono- or dialkylamino, -OH, -C≡N, -SO<sub>2</sub>-NH<sub>2</sub>, -SO<sub>2</sub>-NH-C<sub>1</sub>-C<sub>6</sub> alkyl, -SO<sub>2</sub>-N(C<sub>1</sub>-C<sub>6</sub> alkyl)<sub>2</sub>, -SO<sub>2</sub>-(C<sub>1</sub>-C<sub>4</sub> alkyl), -CO-NH<sub>2</sub>, -CO-NH-C<sub>1</sub>-C<sub>6</sub> alkyl, or -CO-N(C<sub>1</sub>-C<sub>6</sub> alkyl)<sub>2</sub>, or
- 5 C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl or C<sub>2</sub>-C<sub>6</sub> alkynyl, each of which is optionally substituted with 1, 2, or 3 groups that are independently selected from C<sub>1</sub>-C<sub>3</sub> alkyl, halogen, -OH, -SH, -C≡N, -CF<sub>3</sub>, C<sub>1</sub>-C<sub>3</sub> alkoxy, amino, and mono- and dialkylamino, or
- 10 C<sub>1</sub>-C<sub>6</sub> alkoxy optionally substituted with one, two or three of halogen;
- $R_{120}$  is heteroaryl, which is optionally substituted with 1 or 2  $R_{125}$  groups; and
- $R_{130}$  is heterocyclyl optionally substituted with 1 or 2  $R_{125}$  groups;
- 15  $R_2$  is selected from the group consisting of H; C<sub>1</sub>-C<sub>6</sub> alkyl, optionally substituted with 1, 2, or 3 substituents that are independently selected from the group consisting of C<sub>1</sub>-C<sub>3</sub> alkyl, halogen, -OH, -SH, -C≡N, -CF<sub>3</sub>, C<sub>1</sub>-C<sub>3</sub> alkoxy, and -NR<sub>1-a</sub>R<sub>1-b</sub>; wherein
- 20  $R_{1-a}$  and  $R_{1-b}$  are -H or C<sub>1</sub>-C<sub>6</sub> alkyl; -(CH<sub>2</sub>)<sub>0-4</sub>-aryl; -(CH<sub>2</sub>)<sub>0-4</sub>-heteroaryl; C<sub>2</sub>-C<sub>6</sub> alkenyl; C<sub>2</sub>-C<sub>6</sub> alkynyl; -CONR<sub>N-2</sub>R<sub>N-3</sub>; -SO<sub>2</sub>NR<sub>N-2</sub>R<sub>N-3</sub>; -CO<sub>2</sub>H; and -CO<sub>2</sub>-(C<sub>1</sub>-C<sub>4</sub> alkyl);
- 25  $R_3$  is selected from the group consisting of H; C<sub>1</sub>-C<sub>6</sub> alkyl, optionally substituted with 1, 2, or 3 substituents independently selected from the group consisting of C<sub>1</sub>-C<sub>3</sub> alkyl, halogen, -OH, -SH, -C≡N, -CF<sub>3</sub>, C<sub>1</sub>-C<sub>3</sub> alkoxy, and -NR<sub>1-a</sub>R<sub>1-b</sub>; -(CH<sub>2</sub>)<sub>0-4</sub>-aryl; -(CH<sub>2</sub>)<sub>0-4</sub>-heteroaryl; C<sub>2</sub>-C<sub>6</sub> alkenyl;
- 30 C<sub>2</sub>-C<sub>6</sub> alkynyl; -CO-NR<sub>N-2</sub>R<sub>N-3</sub>; -SO<sub>2</sub>-NR<sub>N-2</sub>R<sub>N-3</sub>; -CO<sub>2</sub>H; and -CO-O-(C<sub>1</sub>-C<sub>4</sub> alkyl);
- wherein

$R_{N-2}$  and  $R_{N-3}$  at each occurrence are independently selected from the group consisting of

-C<sub>1</sub>-C<sub>8</sub> alkyl optionally substituted with 1, 2, or 3 groups independently selected from the group consisting of -OH, -NH<sub>2</sub>, phenyl and halogen; -C<sub>3</sub>-C<sub>8</sub> cycloalkyl; -(C<sub>1</sub>-C<sub>2</sub> alkyl)-(C<sub>3</sub>-C<sub>8</sub> cycloalkyl); -(C<sub>1</sub>-C<sub>6</sub> alkyl)-O-(C<sub>1</sub>-C<sub>3</sub> alkyl); -C<sub>2</sub>-C<sub>6</sub> alkenyl; -C<sub>2</sub>-C<sub>6</sub> alkynyl; -C<sub>1</sub>-C<sub>6</sub> alkyl chain with one double bond and one triple bond; aryl; heteroaryl; heterocycloalkyl; or

R<sub>N-2</sub>, R<sub>N-3</sub> and the nitrogen to which they are attached form a 5, 6, or 7 membered heterocycloalkyl or heteroaryl group, wherein said heterocycloalkyl or heteroaryl group is optionally fused to a benzene, pyridine, or pyrimidine ring, and said groups are unsubstituted or substituted with 1, 2, 3, 4, or 5 groups that at each occurrence are independently C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, halogen, halo C<sub>1</sub>-C<sub>6</sub> alkyl, halo C<sub>1</sub>-C<sub>6</sub> alkoxy, -CN, -NO<sub>2</sub>, -NH<sub>2</sub>, NH(C<sub>1</sub>-C<sub>6</sub> alkyl), N(C<sub>1</sub>-C<sub>6</sub> alkyl)(C<sub>1</sub>-C<sub>6</sub> alkyl), -OH, -C(O)NH<sub>2</sub>, -C(O)NH(C<sub>1</sub>-C<sub>6</sub> alkyl), -C(O)N(C<sub>1</sub>-C<sub>6</sub> alkyl)(C<sub>1</sub>-C<sub>6</sub> alkyl), C<sub>1</sub>-C<sub>6</sub> alkoxy C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> thioalkoxy, and C<sub>1</sub>-C<sub>6</sub> thioalkoxy C<sub>1</sub>-C<sub>6</sub> alkyl;

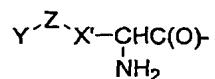
or wherein,

R<sub>2</sub>, R<sub>3</sub> and the carbon to which they are attached form a carbocycle of three thru seven carbon atoms, wherein one carbon atom is optionally replaced by a group selected from -O-, -S-, -SO<sub>2</sub>-, or -NR<sub>N-2</sub>-.

2. A compound according to claim 1, wherein R<sub>n</sub> is -C(=O)-(CRR')<sub>1-6</sub>R<sub>100</sub>.

3. A compound according to claim 1, wherein R<sub>n</sub> is -C(=O)-(CRR')<sub>0-6</sub>R<sub>100</sub>, where R<sub>100</sub> is not -heterocyclyl-W-aryl.

4. A compound according to claim 1, wherein R<sub>n</sub> is



wherein

5 X' is C<sub>1</sub>-C<sub>4</sub> alkylidenyl optionally substituted with 1, 2, or 3 methyl groups; or -NR<sub>4-6</sub>-, where R<sub>4-6</sub> is-H or C<sub>1</sub>-C<sub>6</sub> alkyl; or

R<sub>4</sub> and R<sub>4-6</sub> combine to form -(CH<sub>2</sub>)<sub>n10</sub>-, wherein

n<sub>10</sub> is 1, 2, 3, or 4;

10 Z is selected from a bond; SO<sub>2</sub>; SO; S; and C(O);

Y is selected from H; C<sub>1</sub>-C<sub>4</sub> haloalkyl; C<sub>5</sub>-C<sub>6</sub> heterocycloalkyl containing at least one N, O, or S; phenyl; OH; -N(Y<sub>1</sub>)(Y<sub>2</sub>); C<sub>1</sub>-C<sub>10</sub> alkyl optionally substituted with 1 thru 3 substituents which can be the same or different and are  
15 selected from halogen, hydroxy, alkoxy, thioalkoxy, and haloalkoxy; C<sub>3</sub>-C<sub>8</sub> cycloalkyl optionally substituted with 1, 2, or 3 groups independently selected from C<sub>1</sub>-C<sub>3</sub> alkyl, and halogen; alkoxy; phenyl optionally substituted with halogen, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, CN or NO<sub>2</sub>; phenyl C<sub>1</sub>-C<sub>4</sub> alkyl  
20 optionally substituted with halogen, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, CN or NO<sub>2</sub>; wherein

Y<sub>1</sub> and Y<sub>2</sub> are the same or different and are H; C<sub>1</sub>-C<sub>10</sub> alkyl optionally substituted with 1, 2, or 3 substituents selected from the group consisting of halogen, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>3</sub>-C<sub>8</sub>  
25 cycloalkyl, and OH; C<sub>2</sub>-C<sub>6</sub> alkenyl; C<sub>2</sub>-C<sub>6</sub> alkanoyl; phenyl; -SO<sub>2</sub>- C<sub>1</sub>-C<sub>4</sub> alkyl; phenyl C<sub>1</sub>-C<sub>4</sub> alkyl; and C<sub>3</sub>-C<sub>8</sub> cycloalkyl C<sub>1</sub>-C<sub>4</sub> alkyl; or

-N(Y<sub>1</sub>)(Y<sub>2</sub>) forms a ring selected from piperazinyl, piperidinyl, morpholinyl, and pyrrolidinyl, wherein  
30 each ring is optionally substituted with 1, 2, 3, or 4 groups that are independently C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, C<sub>1</sub>-C<sub>6</sub> alkoxy C<sub>1</sub>-C<sub>6</sub> alkyl, or halogen.

5. A compound according to claim 1 wherein  $R_1$  is  $(CH_2)_{n_1}$ - $(R_{1-aryl})$  where  $n_1$  is zero or one and  $R_{1-aryl}$  is phenyl optionally substituted with 1, 2, 3, or 4 groups independently selected from  $C_1$ - $C_6$  alkyl optionally substituted with 1, 2, or 3 substituents selected from the group consisting of  $C_1$ - $C_3$  alkyl, halogen, -OH, -SH,  $-NR_{1-a}R_{1-b}$ ,  $-C\equiv N$ ,  $-CF_3$ , and  $C_1$ - $C_3$  alkoxy; halogen;  $C_1$ - $C_6$  alkoxy;  $-NR_{N-2}R_{N-3}$ ; and OH; wherein

$R_{1-a}$  and  $R_{1-b}$  are -H or  $C_1$ - $C_6$  alkyl;

$R_{N-2}$  and  $R_{N-3}$  at each occurrence are independently selected from the group consisting of  $-C_1$ - $C_8$  alkyl optionally substituted with 1, 2, or 3 groups independently selected from the group consisting of -OH,  $-NH_2$ , phenyl and halogen;  $-C_3$ - $C_8$  cycloalkyl;  $-(C_1$ - $C_2$  alkyl)- $(C_3$ - $C_8$  cycloalkyl);  $-(C_1$ - $C_6$  alkyl)-O- $(C_1$ - $C_3$  alkyl);  $-C_2$ - $C_6$  alkenyl;  $-C_2$ - $C_6$  alkynyl;  $-C_1$ - $C_6$  alkyl chain with one double bond and one triple bond; aryl; heteroaryl; heterocycloalkyl; or

$R_{N-2}$ ,  $R_{N-3}$  and the nitrogen to which they are attached form a 5, 6, or 7 membered heterocycloalkyl or heteroaryl group, wherein said heterocycloalkyl or heteroaryl group is optionally fused to a benzene, pyridine, or pyrimidine ring, and said groups are unsubstituted or substituted with 1, 2, 3, 4, or 5 groups that at each occurrence are independently  $C_1$ - $C_6$  alkyl,  $C_1$ - $C_6$  alkoxy, halogen, halo  $C_1$ - $C_6$  alkyl, halo  $C_1$ - $C_6$  alkoxy, -CN,  $-NO_2$ ,  $-NH_2$ ,  $NH(C_1$ - $C_6$  alkyl),  $N(C_1$ - $C_6$  alkyl) $(C_1$ - $C_6$  alkyl), -OH,  $-C(O)NH_2$ ,  $-C(O)NH(C_1$ - $C_6$  alkyl),  $-C(O)N(C_1$ - $C_6$  alkyl) $(C_1$ - $C_6$  alkyl),  $C_1$ - $C_6$  alkoxy  $C_1$ - $C_6$  alkyl,  $C_1$ - $C_6$  thioalkoxy, and  $C_1$ - $C_6$  thioalkoxy  $C_1$ - $C_6$  alkyl.

6. A compound according to claim 5, wherein  $R_1$  is aryl, heteroaryl, heterocyclyl,  $-C_1$ - $C_6$  alkyl-aryl,  $-C_1$ - $C_6$  alkyl-



heteroaryl, or -C<sub>1</sub>-C<sub>6</sub> alkyl-heterocyclyl, where the ring portions of each are optionally substituted with 1, 2, 3, or 4 groups independently selected from halogen, -OH, -SH, -C≡N, -NO<sub>2</sub>, -NR<sub>105</sub>R'<sub>105</sub>, -CO<sub>2</sub>R, -N(R)COR', or -N(R)SO<sub>2</sub>R' (where R<sub>105</sub>, R'<sub>105</sub>, R and R' are as defined above), -C(=O)-(C<sub>1</sub>-C<sub>4</sub>) alkyl, -SO<sub>2</sub>-amino, -SO<sub>2</sub>-mono or dialkylamino, -C(=O)-amino, -C(=O)-mono or dialkylamino, -SO<sub>2</sub>-(C<sub>1</sub>-C<sub>4</sub>) alkyl, or

C<sub>1</sub>-C<sub>6</sub> alkoxy optionally substituted with 1, 2, or 3 groups which are independently selected from halogen, or

C<sub>3</sub>-C<sub>7</sub> cycloalkyl optionally substituted with 1, 2, or 3 groups independently selected from halogen, -OH, -SH, -C≡N, -CF<sub>3</sub>, C<sub>1</sub>-C<sub>3</sub> alkoxy, amino, -C<sub>1</sub>-C<sub>6</sub> alkyl and mono- or dialkylamino, or

C<sub>1</sub>-C<sub>10</sub> alkyl optionally substituted with 1, 2, or 3 groups independently selected from halogen, -OH, -SH, -C≡N, -CF<sub>3</sub>, -C<sub>1</sub>-C<sub>3</sub> alkoxy, amino, mono- or dialkylamino and -C<sub>1</sub>-C<sub>3</sub> alkyl, or

C<sub>2</sub>-C<sub>10</sub> alkenyl or C<sub>2</sub>-C<sub>10</sub> alkynyl each of which is optionally substituted with 1, 2, or 3 groups independently selected from halogen, -OH, -SH, -C≡N, -CF<sub>3</sub>, C<sub>1</sub>-C<sub>3</sub> alkoxy, amino, C<sub>1</sub>-C<sub>6</sub> alkyl and mono- or dialkylamino; and the heterocyclyl group is optionally further substituted with

oxo.

7. A compound according to claim 6, wherein R<sub>1</sub> is -C<sub>1</sub>-C<sub>6</sub> alkyl-aryl, -C<sub>1</sub>-C<sub>6</sub> alkyl-heteroaryl, or -C<sub>1</sub>-C<sub>6</sub> alkyl-heterocyclyl, where the ring portions of each are optionally substituted with 1, 2, 3, or 4 groups independently selected from halogen, -OH, -SH, -C≡N, -NO<sub>2</sub>, -NR<sub>105</sub>R'<sub>105</sub>, -CO<sub>2</sub>R, -N(R)COR', or -N(R)SO<sub>2</sub>R' (where R<sub>105</sub>, R'<sub>105</sub>, R and R' are as defined above),

-C(=O)-(C<sub>1</sub>-C<sub>4</sub>) alkyl, -SO<sub>2</sub>-amino, -SO<sub>2</sub>-mono or dialkylamino, -C(=O)-amino, -C(=O)-mono or dialkylamino, -SO<sub>2</sub>-(C<sub>1</sub>-C<sub>4</sub>) alkyl, or

C<sub>1</sub>-C<sub>6</sub> alkoxy optionally substituted with 1, 2, or 3 groups which are independently selected from halogen, or

C<sub>3</sub>-C<sub>7</sub> cycloalkyl optionally substituted with 1, 2, or 3 groups independently selected from halogen, -OH, -SH, -C≡N, -CF<sub>3</sub>, C<sub>1</sub>-C<sub>3</sub> alkoxy, amino, -C<sub>1</sub>-C<sub>6</sub> alkyl and mono- or dialkylamino, or

C<sub>1</sub>-C<sub>10</sub> alkyl optionally substituted with 1, 2, or 3 groups independently selected from halogen, -OH, -SH, -C≡N, -CF<sub>3</sub>, -C<sub>1</sub>-C<sub>3</sub> alkoxy, amino, mono- or dialkylamino and -C<sub>1</sub>-C<sub>3</sub> alkyl, or

C<sub>2</sub>-C<sub>10</sub> alkenyl or C<sub>2</sub>-C<sub>10</sub> alkynyl each of which is optionally substituted with 1, 2, or 3 groups independently selected from halogen, -OH, -SH, -C≡N, -CF<sub>3</sub>, C<sub>1</sub>-C<sub>3</sub> alkoxy, amino, C<sub>1</sub>-C<sub>6</sub> alkyl and mono- or dialkylamino; and the heterocyclyl group is optionally further substituted with oxo.

8. A compound according to claim 7, wherein R<sub>1</sub> is

-(CH<sub>2</sub>)-aryl, -(CH<sub>2</sub>)-heteroaryl, or -(CH<sub>2</sub>)-heterocyclyl, where the ring portions of each are optionally substituted with 1, 2, 3, or 4 groups independently selected from halogen, -OH, -SH, -C≡N, -NO<sub>2</sub>, -NR<sub>105</sub>R'<sub>105</sub>, -CO<sub>2</sub>R, -N(R)COR', or -N(R)SO<sub>2</sub>R' (where R<sub>105</sub>, R'<sub>105</sub>, R and R' are as defined above), -C(=O)-(C<sub>1</sub>-C<sub>4</sub>) alkyl, -SO<sub>2</sub>-amino, -SO<sub>2</sub>-mono or dialkylamino, -C(=O)-amino, -C(=O)-mono or dialkylamino, -SO<sub>2</sub>-(C<sub>1</sub>-C<sub>4</sub>) alkyl, or

C<sub>1</sub>-C<sub>6</sub> alkoxy optionally substituted with 1, 2, or 3 groups which are independently selected from halogen, or

C<sub>3</sub>-C<sub>7</sub> cycloalkyl optionally substituted with 1, 2, or 3 groups independently selected from halogen, -OH, -SH, -C≡N, -CF<sub>3</sub>, C<sub>1</sub>-C<sub>3</sub> alkoxy, amino, -C<sub>1</sub>-C<sub>6</sub> alkyl and mono- or dialkylamino, or

C<sub>1</sub>-C<sub>10</sub> alkyl optionally substituted with 1, 2, or 3 groups independently selected from halogen, -OH, -SH, -C≡N, -CF<sub>3</sub>, -C<sub>1</sub>-C<sub>3</sub> alkoxy, amino, mono- or dialkylamino and -C<sub>1</sub>-C<sub>3</sub> alkyl, or

C<sub>2</sub>-C<sub>10</sub> alkenyl or C<sub>2</sub>-C<sub>10</sub> alkynyl each of which is optionally substituted with 1, 2, or 3 groups independently selected from halogen, -OH, -SH, -C≡N, -CF<sub>3</sub>, C<sub>1</sub>-C<sub>3</sub> alkoxy, amino, C<sub>1</sub>-C<sub>6</sub> alkyl and mono- or dialkylamino; and the heterocyclyl group is optionally further substituted with oxo.

9. A compound according to claim 8, wherein R<sub>1</sub> is -CH<sub>2</sub>-phenyl or -CH<sub>2</sub>-pyridinyl where the ring portions of each are optionally substituted with 1, 2, 3, or 4 groups independently selected from halogen, C<sub>1</sub>-C<sub>4</sub> alkoxy, hydroxy, -NO<sub>2</sub>, and

C<sub>1</sub>-C<sub>4</sub> alkyl optionally substituted with 1, 2, or 3 substituents independently selected from halogen, OH, SH, NH<sub>2</sub>, NH(C<sub>1</sub>-C<sub>6</sub> alkyl), N-(C<sub>1</sub>-C<sub>6</sub> alkyl)(C<sub>1</sub>-C<sub>6</sub> alkyl), C≡N, CF<sub>3</sub>.

10. A compound according to claim 9, wherein R<sub>1</sub> is -CH<sub>2</sub>-phenyl or -CH<sub>2</sub>-pyridinyl where the phenyl or pyridinyl rings are each optionally substituted with 1 or 2 groups independently selected from halogen, C<sub>1</sub>-C<sub>2</sub> alkyl, C<sub>1</sub>-C<sub>2</sub> alkoxy, hydroxy, -CF<sub>3</sub>, and -NO<sub>2</sub>.

11. A compound according to claim 10, wherein R<sub>1</sub> is -CH<sub>2</sub>-phenyl where the phenyl ring is optionally substituted with 2 groups independently selected from halogen, C<sub>1</sub>-C<sub>2</sub> alkyl, C<sub>1</sub>-C<sub>2</sub> alkoxy, hydroxy, and -NO<sub>2</sub>.

12. A compound according to claim 11, wherein R<sub>1</sub> is benzyl, or 3,5-difluorobenzyl.

13. A compound according to claim 1, wherein X is O.

14. A compound according to claim 1, X is S.

15. A compound according to claim 1, X is NR<sub>20</sub>.

16. A compound according to claim 1, X is NR<sub>20</sub>NR<sub>20</sub>.

17. A compound according to claim 1 selected from the group consisting of:

N' - { (1S) - 2-amino-1- (3,5-difluorobenzyl) - 3- [ (3-ethylbenzyl) oxy] propyl } - N, N-dipropylisophthalamide;

N' - { (1S) - 2-amino-1- (3,5-difluorobenzyl) - 3- [ (3-ethylbenzyl) oxy] propyl } - 5-methyl- N, N-dipropylisophthalamide;

N' - { (1S) - 2-amino-1- (3,5-difluorobenzyl) - 3- [ (3-ethylbenzyl) oxy] propyl } - 5-bromo- N, N-dipropylisophthalamide;

N' - { (1S) - 2-amino-1- (3,5-difluorobenzyl) - 3- [ (3-ethylbenzyl) oxy] propyl } - 5-cyano- N, N-dipropylisophthalamide;

N' - { (1S) - 2-amino-1- (3,5-difluorobenzyl) - 3- [ (3-ethylbenzyl) oxy] propyl } - 5- (1,3-oxazol-2-yl) - N, N-dipropylisophthalamide;

N' - { (1S) - 2-amino-1- (3,5-difluorobenzyl) - 3- [ (3-

ethylbenzyl)oxy]propyl}-N,N-dipropyl-5-(1,3-thiazol-2-yl)isophthalamide;

N'-{(1S)-2-amino-1-(3,5-difluorobenzyl)-3-[(3-ethylbenzyl)oxy]propyl}-5-ethynyl-N,N-dipropylisophthalamide;

N'-{(1S)-2-amino-1-(3,5-difluorobenzyl)-3-[(3-ethylbenzyl)oxy]propyl}-5-ethyl-N,N-dipropylisophthalamide;

N<sup>3</sup>-{(1S)-2-amino-1-(3,5-difluorobenzyl)-3-[(3-ethylbenzyl)oxy]propyl}-N<sup>1</sup>,N<sup>1</sup>-dipropylbenzene-1,3,5-tricarboxamide;

N'-{(1S)-2-amino-1-(3,5-difluorobenzyl)-3-[(3-ethylbenzyl)oxy]propyl}-5-[(dimethylamino)methyl]-N,N-dipropylisophthalamide;

N'-{(1S)-2-amino-1-(3,5-difluorobenzyl)-3-[(3-ethynylbenzyl)oxy]propyl}-5-(1,3-oxazol-2-yl)-N,N-dipropylisophthalamide;

N'-{(1S)-2-amino-1-(3,5-difluorobenzyl)-3-[(3-ethynylbenzyl)oxy]propyl}-5-methyl-N,N-dipropylisophthalamide;

N'-{(1S)-2-amino-1-(3,5-difluorobenzyl)-3-[(3-(trifluoromethyl)benzyl)oxy]propyl}-5-(1,3-oxazol-2-yl)-N,N-dipropylisophthalamide;

N'-{(1S)-2-amino-1-(3,5-difluorobenzyl)-3-[(3-(trifluoromethyl)benzyl)oxy]propyl}-5-methyl-N,N-dipropylisophthalamide;

N'-{(1S)-2-amino-1-(3,5-difluorobenzyl)-3-[(3-isopropylbenzyl)oxy]propyl}-5-(1,3-oxazol-2-yl)-N,N-dipropylisophthalamide;

N'-{(1S)-2-amino-1-(3,5-difluorobenzyl)-3-[(3-isopropylbenzyl)oxy]propyl}-5-methyl-N,N-dipropylisophthalamide;

N'-{(1S)-2-amino-1-(3,5-difluorobenzyl)-3-[(3-methoxybenzyl)oxy]propyl}-5-(1,3-oxazol-2-yl)-N,N-

dipropylisophthalamide;

$N'$  - { (1*S*) - 2-amino-1- (3,5-difluorobenzyl) - 3- [ (3-methoxybenzyl) oxy]propyl } - 5-methyl-*N,N*-dipropylisophthalamide;

$N'$  - { (1*S*) - 2-amino-1- (3,5-difluorobenzyl) - 3- { [1- (3-ethynylphenyl) cyclopropyl] oxy } propyl } - 5- (1,3-oxazol-2-yl) - *N,N*-dipropylisophthalamide;

$N'$  - { (1*S*) - 2-amino-1- (3,5-difluorobenzyl) - 3- { [1- (3-ethynylphenyl) cyclopropyl] oxy } propyl } - 5-methyl-*N,N*-dipropylisophthalamide;

$N'$  - [ (1*S*) - 2-amino-1- (3,5-difluorobenzyl) - 3- ( { 1- [3- (trifluoromethyl) phenyl] cyclopropyl } oxy ) propyl ] - 5- (1,3-oxazol-2-yl) - *N,N*-dipropylisophthalamide;

$N'$  - [ (1*S*) - 2-amino-1- (3,5-difluorobenzyl) - 3- ( { 1- [3- (trifluoromethyl) phenyl] cyclopropyl } oxy ) propyl ] - 5-methyl-*N,N*-dipropylisophthalamide;

$N'$  - { (1*S*) - 2-amino-1- (3,5-difluorobenzyl) - 3- { [1- (3-isopropylphenyl) cyclopropyl] oxy } propyl } - 5- (1,3-oxazol-2-yl) - *N,N*-dipropylisophthalamide;

$N'$  - { (1*S*) - 2-amino-1- (3,5-difluorobenzyl) - 3- { [1- (3-isopropylphenyl) cyclopropyl] oxy } propyl } - 5-methyl-*N,N*-dipropylisophthalamide;

$N'$  - { (1*S*) - 2-amino-1- (3,5-difluorobenzyl) - 3- { [1- (3-methoxyphenyl) cyclopropyl] oxy } propyl } - 5- (1,3-oxazol-2-yl) - *N,N*-dipropylisophthalamide;

$N'$  - { (1*S*) - 2-amino-1- (3,5-difluorobenzyl) - 3- { [1- (3-methoxyphenyl) cyclopropyl] oxy } propyl } - 5-methyl-*N,N*-dipropylisophthalamide;

$N'$  - { (1*S*) - 2-amino-1- (3,5-difluorobenzyl) - 3- { [1- (3-ethylphenyl) cyclopropyl] oxy } propyl } - 5- (1,3-oxazol-2-yl) - *N,N*-dipropylisophthalamide;

$N'$  - { (1*S*) - 2-amino-1- (3,5-difluorobenzyl) - 3- { [1- (3-ethylphenyl) cyclopropyl] oxy } propyl } - 5-methyl-*N,N*-dipropylisophthalamide;

$N^4$ -{(1*S*)-2-amino-1-(3,5-difluorobenzyl)-3-[(3-ethylbenzyl)oxy]propyl}-6-(1,3-oxazol-2-yl)- $N^2, N^2$ -dipropylpyridine-2,4-dicarboxamide;

$N^4$ -{(1*S*)-2-amino-1-(3,5-difluorobenzyl)-3-[(3-ethylbenzyl)oxy]propyl}-6-methyl- $N^2, N^2$ -dipropylpyridine-2,4-dicarboxamide;

$N^2$ -{(1*S*)-2-amino-1-(3,5-difluorobenzyl)-3-[(3-ethylbenzyl)oxy]propyl}-6-(1,3-oxazol-2-yl)- $N^4, N^4$ -dipropylpyridine-2,4-dicarboxamide;

$N^2$ -{(1*S*)-2-amino-1-(3,5-difluorobenzyl)-3-[(3-ethylbenzyl)oxy]propyl}-6-methyl- $N^4, N^4$ -dipropylpyridine-2,4-dicarboxamide;

$N'$ -{(1*S*)-2-amino-1-(3,5-difluorobenzyl)-3-[(3-ethylbenzyl)oxy]propyl}-*N*-ethyl-5-(1,3-oxazol-2-yl)-*N*-propylisophthalamide;

$N'$ -{(1*S*)-2-amino-1-(3,5-difluorobenzyl)-3-[(3-ethylbenzyl)oxy]propyl}-*N*-ethyl-5-methyl-*N*-propylisophthalamide;

$N'$ -{(1*S*)-2-amino-1-(3,5-difluorobenzyl)-3-[(3-ethylbenzyl)oxy]propyl}-*N*-butyl-*N*-methyl-5-(1,3-oxazol-2-yl)isophthalamide;

$N'$ -{(1*S*)-2-amino-1-(3,5-difluorobenzyl)-3-[(3-ethylbenzyl)oxy]propyl}-*N*-butyl-*N*,5-dimethylisophthalamide;

$N'$ -{(1*S*)-2-amino-1-(3,5-difluorobenzyl)-3-[(3-ethylbenzyl)oxy]propyl}-5-(1,3-oxazol-2-yl)-*N*,*N*-dipropylisophthalamide;

$N'$ -{(1*S*)-2-amino-1-(3,5-difluorobenzyl)-3-[(3-ethylbenzyl)oxy]propyl}-5-methyl-*N*,*N*-dipropylisophthalamide;

$N'$ -{(1*S*)-2-amino-1-(3,5-difluorobenzyl)-3-[(6-ethylpyridin-2-yl)methoxy]propyl}-5-(1,3-oxazol-2-yl)-*N*,*N*-dipropylisophthalamide;

$N'$ -{(1*S*)-2-amino-1-(3,5-difluorobenzyl)-3-[(6-

ethylpyridin-2-yl)methoxy]propyl}-5-methyl-*N,N*-dipropylisophthalamide;

*N'*-{(1*S*)-2-amino-1-(3,5-difluorobenzyl)-3-[(4-ethylpyridin-2-yl)methoxy]propyl}-5-(1,3-oxazol-2-yl)-*N,N*-dipropylisophthalamide;

*N'*-{(1*S*)-2-amino-1-(3,5-difluorobenzyl)-3-[(4-ethylpyridin-2-yl)methoxy]propyl}-5-methyl-*N,N*-dipropylisophthalamide;

*N'*-{(1*S*)-2-amino-1-(3,5-difluorobenzyl)-3-[(4-ethylpyrimidin-2-yl)methoxy]propyl}-5-(1,3-oxazol-2-yl)-*N,N*-dipropylisophthalamide;

*N'*-{(1*S*)-2-amino-1-(3,5-difluorobenzyl)-3-[(4-ethylpyrimidin-2-yl)methoxy]propyl}-5-methyl-*N,N*-dipropylisophthalamide;

*N'*-[(1*S*)-2-amino-3-butoxy-1-(3,5-difluorobenzyl)propyl]-5-(1,3-oxazol-2-yl)-*N,N*-dipropylisophthalamide;

*N'*-[(1*S*)-2-amino-3-butoxy-1-(3,5-difluorobenzyl)propyl]-5-methyl-*N,N*-dipropylisophthalamide;

*N'*-[(1*S*)-2-amino-1-(3,5-difluorobenzyl)-3-(3-methylbutoxy)propyl]-5-(1,3-oxazol-2-yl)-*N,N*-dipropylisophthalamide;

*N'*-[(1*S*)-2-amino-1-(3,5-difluorobenzyl)-3-(3-methylbutoxy)propyl]-5-methyl-*N,N*-dipropylisophthalamide;

*N'*-[(1*S*)-2-amino-1-(3,5-difluorobenzyl)-3-propoxypropyl]-5-(1,3-oxazol-2-yl)-*N,N*-dipropylisophthalamide;

*N'*-[(1*S*)-2-amino-1-(3,5-difluorobenzyl)-3-propoxypropyl]-5-methyl-*N,N*-dipropylisophthalamide;

*N'*-[(1*S*)-2-amino-1-(3,5-difluorobenzyl)-3-isobutoxypropyl]-5-(1,3-oxazol-2-yl)-*N,N*-dipropylisophthalamide; and



*N'*-[(1*S*)-2-amino-1-(3,5-difluorobenzyl)-3-isobutoxypropyl]-5-methyl-*N,N*-dipropylisophthalamide.

18. A method of treating a patient who has, or in preventing a patient from getting, a disease or condition  
5 selected from the group consisting of Alzheimer's disease, for helping prevent or delay the onset of Alzheimer's disease, for treating patients with mild cognitive impairment (MCI) and preventing or delaying the onset of Alzheimer's disease in those who would progress from MCI to AD, for treating Down's  
10 syndrome, for treating humans who have Hereditary Cerebral Hemorrhage with Amyloidosis of the Dutch-Type, for treating cerebral amyloid angiopathy and preventing its potential consequences, i.e. single and recurrent lobar hemorrhages, for treating other degenerative dementias, including dementias of  
15 mixed vascular and degenerative origin, dementia associated with Parkinson's disease, dementia associated with progressive supranuclear palsy, dementia associated with cortical basal degeneration, diffuse Lewy body type of Alzheimer's disease and who is in need of such treatment which comprises  
20 administration of a therapeutically effective amount of a compound selected from the group consisting of a substituted aminoalcohol of the formula (I), or a pharmaceutically acceptable salt or ester thereof, wherein X, R<sub>20</sub>, R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>n</sub> and R<sub>c</sub> are as defined in claim 1.

25

19. A method for making a compound according to claim 1.

20. A pharmaceutical composition comprising a compound according to claims 1 in combination with a physiologically  
30 acceptable carrier or excipient.

21. The use of a compound or salt according to claim 1 for the manufacture of a medicament.

22. The use of a compound or salt according to claim 1 for the manufacture of a medicament for use in the treatment or prevention of Alzheimer's disease, mild cognitive impairment Down's syndrome, Hereditary Cerebral Hemorrhage with Amyloidosis of the Dutch-Type, cerebral amyloid angiopathy, other degenerative dementias, dementias of mixed vascular and degenerative origin, dementia associated with Parkinson's disease, dementia associated with progressive supranuclear palsy, dementia associated with cortical basal degeneration, or diffuse Lewy body type of Alzheimer's disease.

15